MA(n) : $v(t) = c_0 \eta(t) + c_1 \eta(t-1) + \dots + c_n \eta(t-n)$

$$\gamma(\tau) = \begin{cases} (c_0^2 + c_1^2 + \dots + c_n^2)\lambda^2 & \tau = 0 \\ (c_0 c_1 + c_1 c_2 + \dots + c_{n-1} c_n)\lambda^2 & |\tau| = 1 \\ (c_0 c_2 + c_1 c_3 + \dots + c_{n-2} c_n)\lambda^2 & |\tau| = 2 \\ \vdots & \\ c_0 c_n \lambda^2 & |\tau| = n \\ 0 & |\tau| > n \end{cases} := \begin{cases} k_0 \lambda^2 & \tau = 0 \\ k_1 \lambda^2 & |\tau| = 1 \\ k_2 \lambda^2 & |\tau| = 2 \\ \vdots & \\ k_n \lambda^2 & |\tau| = n \\ 0 & |\tau| > n \end{cases}$$

$\gamma(\tau)$: covariance function

$$\Gamma(\omega) = \gamma(0) + \sum_{\tau=1}^{+\infty} \gamma(\tau)\, 2\cos(\omega\tau)$$

$\Gamma(\omega)$: spectrum

$$= k_0 \lambda^2 + \sum_{\tau=1}^{n} \gamma(\tau)\, 2\cos(\omega\tau)$$

$$= \left(k_0 + 2\left(\sum_{\tau=1}^{n} k_\tau \cos(\omega\tau)\right)\right)\lambda^2$$

$$W(z) = \frac{c_0 z^n + c_1 z^{n-1} + \dots + c_n}{z^n}$$

$W(z)$: transfer function

AR(n): $v(t) = a_1 v(t-1) + \dots + a_n v(t-n) + \eta(t)$

$$W(z) = \frac{z^n}{z^n - a_1 z^{n-1} - \dots - a_n}$$